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ABSTRACT

To assist Congress as it prepares for the reauthorization of the Higher Education Act, a study was undertaken of Title IV aid programs and higher education tax provisions designed to assist students and families. Focusing on the HOPE and Lifetime Learning tax credits. Data from the National Postsecondary Student Aid Study and other databases were used. In the 1999-2000 academic year, it is estimated that the Lifetime Learning and HOPE tax credits provided more than 4 in 10 undergraduate students with benefits that equaled a varying share of tuition and fees charged and Title IV aid received. Some students' families had incomes too high to use the credits; others had tax liabilities too low to use the credits or to use the credits to the maximum. Among all dependent students who received the HOPE credit, it equaled, on average, about 20% of the tuition and fees, and for independent students, the HOPE credit equaled about 30% of tuition and fees. Taken together, Title IV student aid and higher education tax credits now assist more than 70% of undergraduate students and families in paying for postsecondary education. Five appendixes contain details about methodology and research, comments from government agencies, and a list of contacts and staff at the General Accounting Office. (Contains 14 tables, 13 figures, and 19 references.) (SLD)

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United States General Accounting Office

GAO

Report to Congressional Committees

September 2002

STUDENT AID AND TAX BENEFITS

Better Research and Guidance Will Facilitate Comparison of Effectiveness and Student Use

ED 469 643

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Abbreviations

AGI	adjusted gross income
EFC	expected family contribution
FAFSA	Free Application for Federal Student Aid
GPRA	Government Performance and Results Act of 1993
IRS	Internal Revenue Service
HEA	Higher Education Act
NPSAS	National Postsecondary Student Aid Study
SEOG	Supplemental Educational Opportunity grants
SOI	Statistics of Income

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United States General Accounting Office
Washington, DC 20548

September 13, 2002

The Honorable Edward M. Kennedy
Chairman
The Honorable Judd Gregg
Ranking Minority Member
Committee on Health, Education, Labor, and Pensions
United States Senate

The Honorable John A. Boehner
Chairman
The Honorable George Miller
Ranking Minority Member
Committee on Education and the Workforce
House of Representatives

The federal government uses a range of policy tools to assist students in financing postsecondary education, including direct expenditures and federal tax law. Title IV of the Higher Education Act (HEA), first adopted in 1965, authorizes federal grant and loan programs, providing a total of $53 billion in assistance to 8.1 million students in fiscal year 1999. In the past decade, the federal government has increasingly relied upon another tool: the tax code. The Taxpayer Relief Act of 1997 allowed eligible taxpayers to reduce their tax liability by receiving up to a $1,500 HOPE or $1,000 Lifetime Learning tax credit for tuition and course-related fees paid. The 2001 Economic Growth and Tax Relief Reconciliation Act created a new tax deduction for tuition expenses, and expanded many existing higher education tax provisions. For example, the law excluded the earnings of state-sponsored college savings and prepaid tuition plans from federal income taxation, providing they are used to meet tuition and other educational expenses, and it increased the annual contribution limit for Coverdell Education Savings Accounts. The federal investment in providing student assistance through the tax code has risen sharply, from an estimated $0.0056 billion in 1996 to $7.6 billion in 2002,[1] more than 80 percent of which is comprised of HOPE and Lifetime Learning tax

[1]Cost is measured in estimated revenues foregone, and expressed in constant 2002 dollars. Total costs are calculated on the basis of eight tax provisions that aim to help students and families save, pay for, or repay the costs of higher education, and do this by permitting tax filers to reduce their income tax liability through the use of qualified educational expenses. See table 1.

expenditures. In tax year 1999, 6.4 million tax filers obtained about $4.8 billion dollars in higher education tax credits. In comparison, the federal government's largest student aid program, the Pell grant program, provided 3.7 million students with $7.2 billion dollars in grants during the 1999-2000 academic year.

To assist Congress as it prepares for the reauthorization of HEA, we reviewed the title IV aid programs and higher education tax provisions designed to assist students and families. Our review focused on three questions: (1) What assistance do HOPE and Lifetime Learning tax credits provide, and how do credit benefits compare to the tuition and fees that students are charged, and to title IV aid they receive? (2) To what extent do available policy and instructions provide clear guidance about the impact of tax provisions on eligibility for title IV financial aid? (3) To what extent is information available to Congress about the relative effectiveness of title IV grants and loans and the HOPE and Lifetime Learning tax credits?

To answer question one, we estimated the HOPE and Lifetime Learning tax credits students received on the basis of the credits' design and on data in the National Postsecondary Student Aid Study (NPSAS). NPSAS examines how students and their families pay for education and is based on a nationally representative sample of students. Appendix I describes our estimation methodology. We also used NPSAS to estimate the title IV aid received by students considered to be financially dependent on their parents and by financially independent students.[2] To answer question two, we reviewed the HEA, Internal Revenue Code, title IV financial aid policies and instructions developed by the Department of Education (Education), and interviewed Education officials. To answer question three, we reviewed studies of the effectiveness of title IV aid and the HOPE and Lifetime Learning tax credits. We focused on their effects on college attendance and choice, completion, and costs. These outcomes were chosen because they have been the focus of congressional concern, as expressed in committee reports, statutorily established study commissions, and requests for our work from Congress. We also

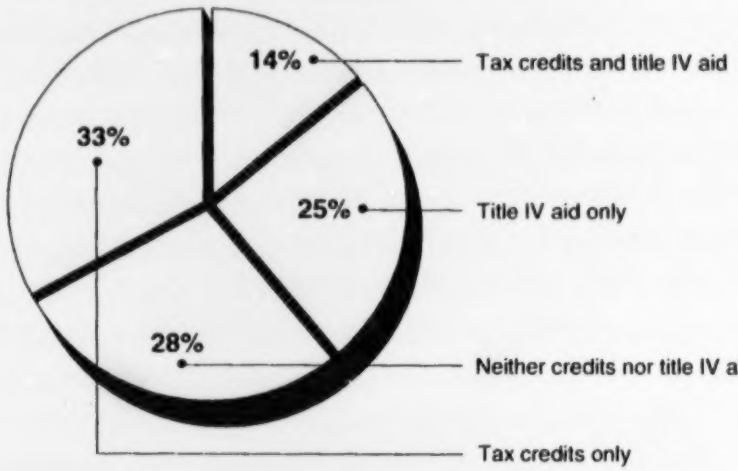
[2]To be classified as an independent student in the title IV financial aid process, students must meet one of the following criteria in academic year 2002-03: (1) veteran of armed services; (2) born before January 1, 1979; (3) married; (4) enrolled in a graduate or professional educational program; (5) have legal dependents other than a spouse; or (6) be an orphan or ward of the court. Financial aid administrators may also classify students as independents through the exercise of their professional judgment.

interviewed Education and Department of Treasury (Treasury) officials about their research and evaluation concerning title IV aid and tax credits. Appendix II provides details about our review of the studies. We conducted our work from August 2001 to July 2002 in accordance with generally accepted government auditing standards.

Results in Brief

In the 1999-2000 academic year, the Lifetime Learning and HOPE tax credits provided, we estimate, more than 4 in 10 undergraduate students with benefits that equaled a varying share of tuition and fees charged and title IV aid received. Some students did not receive the credits on the basis of their (or their family's) income: those with incomes above $100,000 were not eligible to claim the credits, and those with incomes under $20,000 typically lacked a sufficient tax liability to use the credits. Others received the credits, but obtained less than the credits' maximum value because their educational expenses were too small to make full use of the credits. Among all dependent students who received the HOPE credit, it equaled, on average, about 20 percent of the tuition and fees they were charged, while among all independent students the HOPE credit equaled 30 percent of the tuition and fees they were charged, according to our estimates. Some students received both a tax credit and title IV aid. For these students, HOPE credits equaled, on average, about one-fifth of the face value of the title IV aid they received, while the Lifetime Learning credit equaled about one-tenth of the face value of their title IV aid. As figure 1 shows, title IV student aid and higher education tax credits, taken together, now assist more than 70 percent of undergraduate students and families in paying for postsecondary education.

Figure 1: Estimated Use of Higher Education Tax Credits and Title IV Student Aid among All Undergraduates in 1999-2000



Note: See appendix I for our methodology used to generate credit estimates and the confidence intervals associated with these estimates.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Available policy and instructions provide clear guidance about the impact that several, but not all, tax provisions have on title IV aid eligibility. For several higher education tax provisions, the HEA or Education's policies and instructions make clear how the use of tax provisions affects aid eligibility. For some tax provisions, however, Education has not established a policy on how their use affects aid eligibility, or it has established a policy but not communicated it clearly to aid applicants. Specifically, Education has not decided whether aid applicants should report the untaxed earnings of state-sponsored college savings plans, prepaid tuition plans, or Coverdell Educational Savings accounts when applying for title IV aid, as is the case with other types of untaxed income. As a result, those who wish to use these tax provisions are faced with uncertainty about how this income affects aid eligibility. Education has decided how assets in state-sponsored college savings plans, Coverdell Educational Savings accounts, and Savings Bonds should be reported on the title IV aid application form and used in calculating aid eligibility. However, the form provides unclear instructions about who should report the ownership of these assets, the student or parent. This may cause aid applicants to err in reporting ownership of these assets, and result in their

eligibility for aid being miscalculated. We make recommendations in this report to address these problems.

Little information is available to Congress on the relative effectiveness of title IV grants and loans and the HOPE and Lifetime Learning tax credits in promoting postsecondary attendance, choice, and completion, or their impact on college costs. This is due, in part, to the data and methodological challenges intrinsic to conducting studies examining their effects. Moreover, Education has conducted few evaluations of the title IV aid programs, while Treasury has not yet examined the effects of higher education tax credits. Using statistical techniques and research designs that respond to these data and methodological challenges, academic researchers have begun to produce findings about the impact of student financial aid. For example, most studies that we reviewed found that grant aid results in increased rates of college attendance, though estimates of its magnitude vary. Education has focused its analysis of title IV programs on program delivery, rather than impact. Lacking access to individual taxpayer data, Education has been unable to analyze the use of higher education tax credits or their effects. Treasury has access to taxpayer data but has not used these data as a basis for evaluating the impact of tax credits. In addition, Treasury does not possess data on the receipt of title IV aid, limiting its capacity to assess the credits' effects. As a result, little information has been available to help Congress weigh the relative effectiveness of grants, loans, and tax credits. We recommend that the Secretaries of Education and Treasury take steps to address this lack of information.

We provided Education and Treasury with a copy of our draft report for review and comment. In written comments on our draft report, Education and Treasury generally agreed with our reported findings and recommendations. Education's and Treasury's comments appear in appendix III and IV, respectively.

Background

Education is the primary agency overseeing federal investments in support of students enrolled in postsecondary education. Education's grant and loan programs are the largest source of student aid in the United States; however, tax provisions recently enacted by Congress have created new sources of support to assist students in paying for postsecondary education. These two sources of student assistance—grants and loans, and tax benefits—are intended to promote access to higher education and to ensure its affordability. To help track progress toward these and other goals, Education has developed strategic and performance goals in

accordance with the Government Performance and Results Act of 1993 (GPRA).[3]

Title IV Aid

Title IV of the HEA of 1965, as amended, authorizes the federal government's financial aid programs for postsecondary education. Title IV programs include Pell grants for low-income students, parent loans known as PLUS loans, and Stafford loans. Stafford loans may be either subsidized or unsubsidized. The federal government pays the interest cost on subsidized loans while the student is in school. The terms and conditions of unsubsidized loans are the same as those for subsidized loans, but the federal government does not pay the interest costs on the loan while the student is in school; rather, students are responsible for all interest costs. Title IV also authorizes programs funded by the federal government and administered by participating higher education institutions, commonly known as campus-based aid—Supplemental Educational Opportunity grants (SEOG), Perkins loans, and federal work-study aid. In academic year 1999-2000, Education awarded approximately $53 billion to students through the title IV programs.

In order to receive title IV aid, a student must apply using the Free Application for Federal Student Aid (FAFSA). Information from the FAFSA is used to determine the amount of money—called the expected family contribution (EFC)—that the student and/or the family is expected to contribute to the student's education. Statutory definitions establish the criteria that students must meet to be considered independent of or dependent on their parents for purposes of financial aid, and statutory formulas establish the share of income and assets that are expected to be available for the student's education.[4] Once the EFC is established, it is compared to the cost of attendance at the institution chosen by the student. If the EFC is greater than the cost of attendance, the student is not considered to have financial need for federal title IV aid programs. If

[3]GPRA seeks to improve the efficiency, effectiveness, and public accountability of federal agencies as well as to improve congressional decision-making. To do so, the act outlines a series of steps in which agencies are required to identify their goals, measure performance, and report on the degree to which those goals were met.

[4]For students classified as financially dependent on their parents, the EFC is based on the income and assets of the student and parents. The student and parent EFC are computed separately and then summed. For independent students with dependents, the EFC calculation is similar to that of a parent of a dependent student. For independent students without dependents, the EFC is based on a portion of their income and assets.

the cost of attendance is greater than the EFC, then the student is considered to have financial need. Financial aid administrators at the student's school then create a federal financial aid package that may include grants, loans, and work-study. As part of the financial aid package students may also receive state, institutional, or private aid.

In 1999-2000, about one in four undergraduates (23 percent) received federal Pell or SEOG grant aid. Awarded on the basis of financial need, these grants were highly targeted. About 75 percent of dependent students receiving Pell and SEOG grants had family incomes of $30,000 or less,[5] while three-quarters of independent students receiving them had incomes of $20,000 or less.[6] Stafford loans were received by 28 percent of undergraduates, and served a more varied population. A broad range of dependent undergraduates made use of need-based (or subsidized) student loans. Of the unsubsidized loans received by dependent undergraduates, 60 percent were received by those with family incomes of $60,000 or above per year. Of all loans received by independent students—subsidized and unsubsidized—three quarters of their total dollar amount went to students whose incomes were less than $30,000 per year.

Tax Provisions

In recent years Congress has enacted eight higher education tax provisions that are specifically designed to help individuals and families save for, repay, or meet the current costs of higher education, and accomplish this by permitting tax filers to use their qualified educational expenses to reduce their federal income tax liability (see table 1).

[5]Dependent students' income is measured by parental income for 1998. If students applied for financial aid, parental income was measured as adjusted gross income. See appendix I for additional information on income measurement in NPSAS.

[6]The income of independent students is that of the student and, if married, that of their spouse, for 1998.

Table 1: Selected Postsecondary Education Tax Provisions, 2002

Tax provision and year of adoption	Tax benefit	Definition of qualified higher education expense	Who is eligible	Tax benefit is phased out for filers with modified adjusted gross incomes between
HOPE credit, 1997	Maximum credit: $1,500 per student. Credit rate is 100 percent on first $1,000 of qualified higher education expenses, 50 percent on next $1,000. Nonrefundable: if filer has no tax liability due to offsetting deductions, exemptions, or other tax credits, filer cannot receive credit.	Tuition and fees at institutions eligible to participate in title IV programs. Filers must reduce qualified expenses by the amount of tax-free educational assistance received.	Tax filer on behalf of self, spouse, or dependent who is working towards a degree or certificate at least half time in the first 2 years of postsecondary enrollment.	Single filer[a] $41-$52,000 Joint return: $82-$102,000.
Lifetime Learning credit, 1997	Maximum credit: $1,000 per tax filer (20 percent of qualified higher education expenses up to $5,000). In 2003 maximum credit increases to $2,000 per tax filer (20 percent of qualified higher education expenses up to $10,000). Nonrefundable: if filer has no tax liability due to offsetting deductions, exemptions, or other tax credits, filer cannot receive credit.	Tuition and fees at institutions eligible to participate in title IV programs. Filers must reduce qualified expenses by the amount of tax-free educational assistance received.	Tax filer on behalf of self, spouse, or dependent who is enrolled in undergraduate or graduate courses, or any course that aids in learning new or improving existing job skills, for as many years as the student is enrolled.	Single filer[a] $41-$51,000 Joint return: $82-$102,000.
Student loan interest deduction, 1997	Maximum deduction: $2,500 Interest paid on eligible education loans is deductible.	Eligible loans are those used to pay for tuition, fees, room and board, and related expenses minus any scholarships or grants received.	Tax filer, even those who do not itemize, may deduct interest paid.	Single filer: $50-$65,000 Joint return: $100-$130,000.
Exclusion for US Series EE or I Savings Bonds, 1988	Interest income from bonds purchased after December 31, 1989, may be excluded from income subject to taxation if bond proceeds are used to pay qualifying higher education expenses.	Tuition and fees at institutions eligible to participate in title IV programs. These must be reduced by tax-free educational assistance, tax-free withdrawals from a Coverdell ESA, and expenses used in figuring HOPE and Lifetime Learning credits.	Similar to Lifetime Learning credit. The bond owner must be at least 24 years old before the bond's issue date.	For tax-free withdrawals, $57,600-$72,000 for single filers and $86,460-$116,400 for joint returns.

Tax provision and year of adoption	Tax benefit	Definition of qualified higher education expense	Who is eligible	Tax benefit is phased out for filers with modified adjusted gross incomes between
Prepaid tuition plans, 1996. (Also called qualified tuition plans or, section 529 plans.)	Earnings withdrawn from prepaid plans when used to pay for qualified higher education expenses are free from federal income taxation after Dec. 31, 2001 for state-sponsored programs, and after Dec. 31, 2003 for programs of private institutions.	In general, tuition and required fees. Room and board if enrolled half time or more. Specifics can vary by plan. For example, beneficiary may be limited to attending state public colleges or any college in a specific state.	Specifics depend on particular plan. Normally a plan is open for contributions only on behalf of young children and accounts must be closed within some number of years after the beneficiary reaches college age.	Not applicable.
State-sponsored College Savings Plans, 1996. (Also called Qualified Tuition Plans or, Section 529 plans.)	Earnings withdrawn from state-sponsored savings plans when used to pay for qualified higher education expenses are free from federal income taxation.	Tuition, fees, books, supplies, and equipment required for attendance. Room and board if enrolled half time or more.	Same as Lifetime Learning credit.	Not applicable.
Coverdell Education Savings Accounts, 1997.	Account earnings and distributions used for qualified higher education expenses are tax-free. Annual contribution limit is $2,000 per year per student through age 17 (unless special needs beneficiary).	Tuition, fees, books, supplies, and equipment required for attendance. Room and board if enrolled half time or more.	Distributions from Coverdell Education Savings Accounts can be used for students enrolled on full-time, half time, or less than half-time basis.	For contributions, $95-$110,000 for single filers and $190-$220,000 for joint returns.
Tax deduction for tuition and fees, 2001.	Maximum deduction: $3,000 per return.	Tuition and fees at institutions eligible to participate in title IV programs.	Same as Lifetime Learning credit. For 2002-05, taxpayers will have the option of using either the HOPE tax credit or the tuition deduction.	Single filer: $65,000 Joint Return: $130,000.

[a]Under the Taxpayer Relief Act of 1997, the income phase-out amounts are indexed to inflation.

Source: Internal Revenue Code, Department of Treasury, Joint Committee on Taxation, and Congressional Research Service.

Education's Strategic and Annual Performance Goals

Education has a strategic goal that is particularly relevant to its title IV programs, to "Enhance the Quality of and Access to Postsecondary Education." To ensure its progress toward this goal, Education has developed annual goals that focus on (1) reducing the gaps in student achievement and completion among students differing by race, ethnicity, income, and disability; and (2) improving the effectiveness of its title IV funding mechanisms in terms of, among other things, tuition prices and borrower indebtedness.

Hope and Lifetime Learning Credits Provide Benefits for a Substantial Portion of Undergraduate Students

In the 1999-2000 academic year, more than 4 in 10 undergraduate students received a higher education tax credit, according to our estimate. On average, the HOPE tax credit equaled about 20 percent of the tuition and fees that were charged to dependent students, and 30 percent of those charged to independent students. The Lifetime Learning credit equaled 8 percent of tuition and fees charged to dependent students, and 11 percent for independent students. For both groups of students the HOPE and Lifetime Learning credits comprised a larger share of the net tuition and fees they paid—that is, tuition and fees charged, minus all types of grant assistance. In addition to the credits, some students—about 14 percent—also received title IV aid. For these students, credit amounts ranged from 4 to 26 percent of the face value[7] of the title IV aid that they received. Taken together, credits and title IV student aid now assist about 7 out of 10 undergraduate students in meeting the costs of postsecondary education.

HOPE and Lifetime Learning Tax Credits Were Received by Many, but Not All

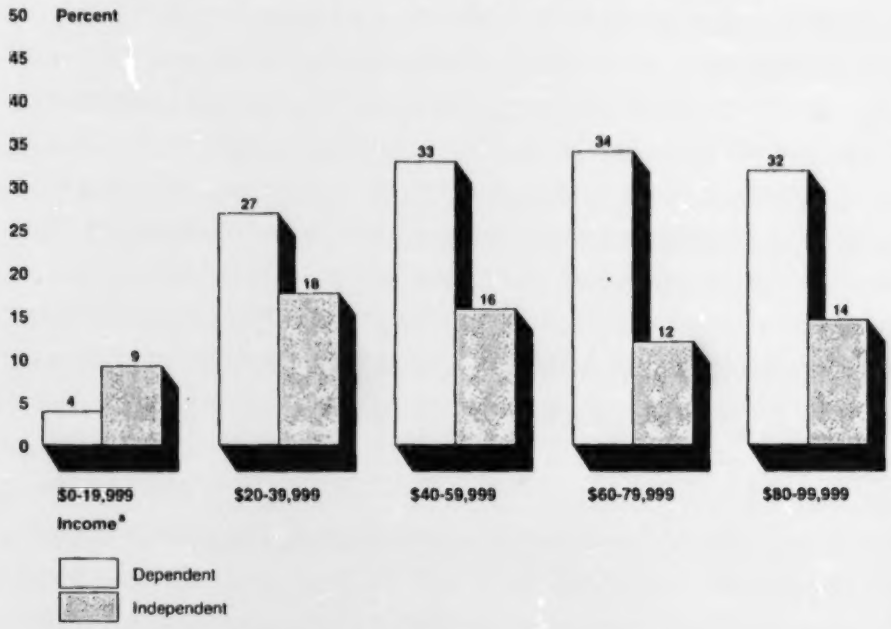
According to our estimates, more than 4 in 10 undergraduate students received a higher education tax credit in 1999-2000, a larger share of students than participated in the federal government's title IV programs. About 29 percent received a Lifetime Learning tax credit, while 17 percent received a HOPE tax credit. Students may receive title IV aid and a HOPE or Lifetime Learning credit, and many did—an estimated 14 percent of undergraduate students received both.

Not all undergraduates were eligible to receive a HOPE or Lifetime Learning tax credit. One factor that affects eligibility is income. Students from families with parents who filed jointly and had incomes above $100,000 were ineligible to receive the credits. In addition, in order to receive a credit, tax filers must have a positive tax liability. For a two-parent family with one dependent college student, federal income tax

[7]We report the face value of title IV loans awarded, rather than their economic subsidy value to the student. Although title IV loans must be repaid, they can provide a subsidy by offering funds to students who could not otherwise find lenders, and by offering lower interest rates than are available in the non-title IV private loan market. In contrast to grants and tax credits, which provide subsidies that are equal to their face values, loans provide subsidies that are considerably less, on average, than their face values. Dynarski ("Loans, Liquidity, and Schooling Decisions," February 2002) calculates that the subsidy for loans of average riskiness is equal to about 30 percent of the face value for subsidized Stafford loans and about 15 percent for unsubsidized Stafford loans. Cameron and Heckman (1999) put the subsidy value at about a third of the amount of loans disbursed.

liability began in 2000 at about $15,750.[a] As shown in figures 2 and 3, a small proportion of those dependent students whose family incomes were below $20,000 received the credits.

Figure 2: Percent of All Undergraduate Students Receiving HOPE Credit



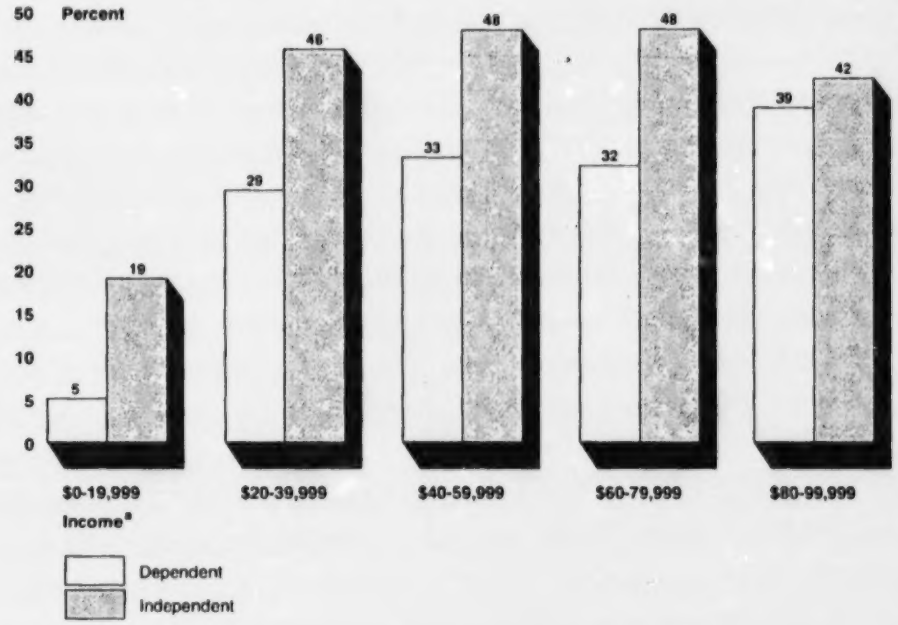
Note: See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental adjusted gross income (AGI); independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

[a]Assuming the family filed a joint return and used a standard deduction.

Figure 3: Percent of All Undergraduate Students Receiving Lifetime Credit



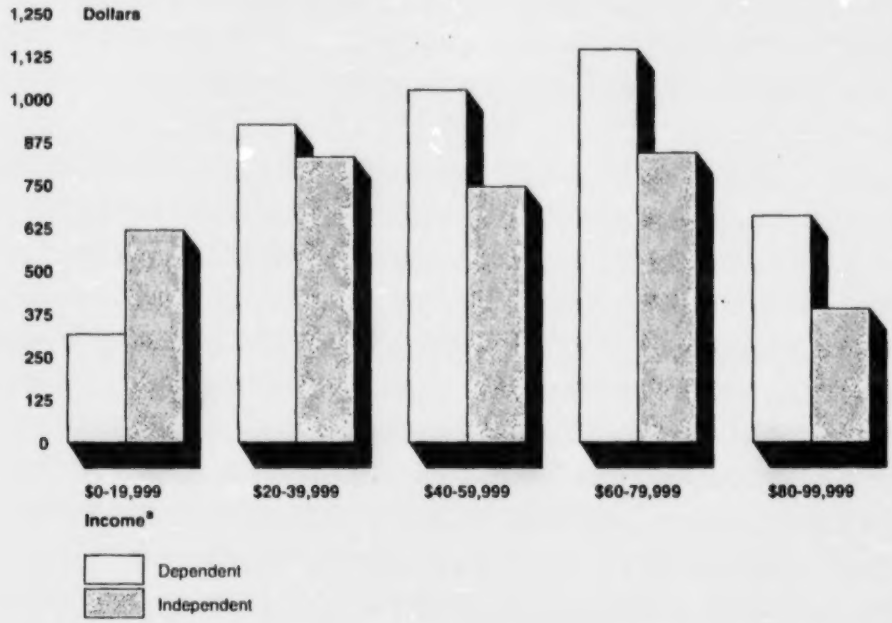
Note: See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figures 4 and 5 show that students who received the credits did not necessarily receive the full amount. Students may not have a sufficiently large tax liability or qualified educational expenses necessary to receive a tax credit's full value. Tax filers must have qualified educational expenses of $2,000 per student to receive the maximum HOPE credit, while they must have $5,000 of qualified expenses (for themselves or others claimed on their return) to receive the maximum value of the Lifetime Learning credit. Tax filers must subtract the nontaxable aid they received, such as Pell grants or scholarships, from qualified educational expenses. The reduction of qualified educational expenses by nontaxable aid reduces the number of students who might otherwise receive the credits, and it reduces the credit amounts obtained, particularly, we estimate, among dependent students with family incomes in the $10-$50,000 range.

Figure 4: Average Amount of HOPE Credit Received by Dependent and Independent Students

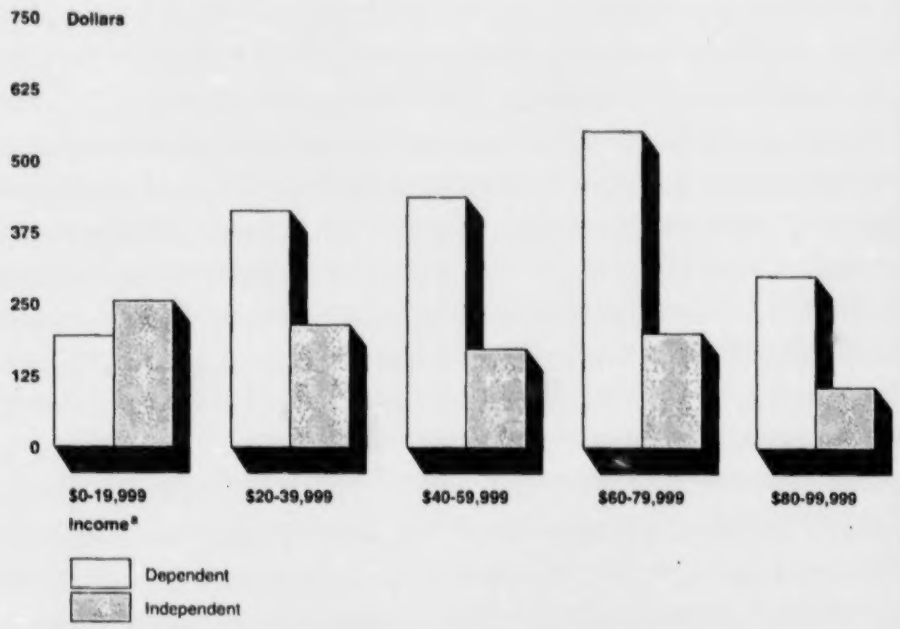


Note: See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figure 5: Average Amount of Lifetime Learning Credit Received by Dependent and Independent Students



Note: See appendix I for confidence intervals associated with these estimates.

*Dependent income equals 1998 parental AGI; independent income equals student 1998 AGI and, if married, spouse's AGI.

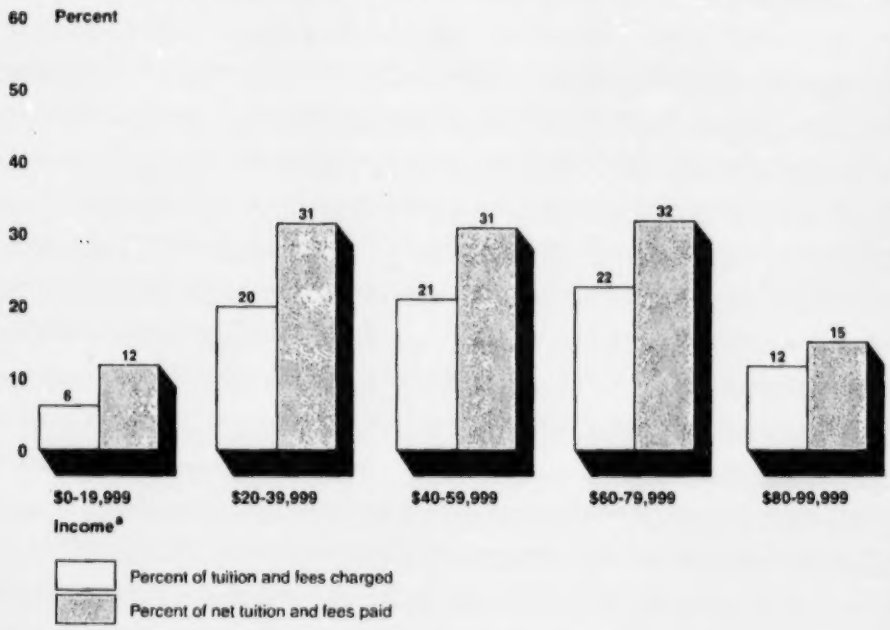
Source: GAO calculations based upon 1999-2000 NPSAS data.

Credits Equaled a Varying Share of Tuition and Fees

For the 47 percent of all undergraduates who received a tax credit in 1999-2000, the higher education tax credits equaled a varying share of the tuition and fees. On average, the HOPE tax credit equaled about 20 percent of the tuition and fees that were charged to dependent students, and 30 percent of independent students' tuition and fee charges. The Lifetime Learning credit equaled 8 percent of tuition and fees charged to dependent students, and 11 percent for independent students. Many students receive private, institutional, state, and federal grants that reduce the tuition and fee costs that they must pay out of their own resources. In claiming the HOPE and Lifetime Learning credits, tax filers must reduce their qualified educational expenses, tuition and fees, by these (and any other) forms of nontaxable aid. We calculated students' net tuition and fees as the tuition and fees they were charged minus all private, institutional, state, and

federal grant aid they received. We estimate that the HOPE credit equaled, on average, 28 percent of dependent students' net tuition and fees, and 36 percent of independent students' net tuition and fees. The Lifetime Learning credit equaled about 12 percent of dependents' net tuition and fees, and 15 percent of independents' net tuition and fees. Figure 6 compares the estimated HOPE credit to the total tuition and fees charged to dependent students, and to the net tuition and fees they paid. Figure 7 presents the same comparisons for independent students. Figure 8 compares the estimated Lifetime Learning credits received to the total tuition and fees charged to dependent students, and to the net tuition and fees they paid. Figure 9 presents the same comparisons for independent students.

Figure 6: HOPE Credit as a Percent of Tuition and Fees Charged and Net Tuition and Fees Paid by Dependent Students

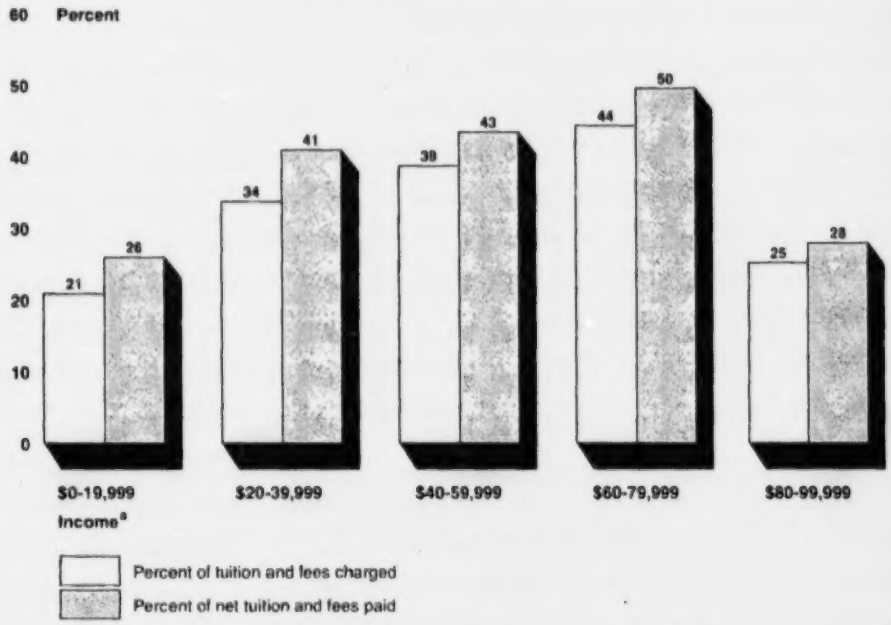


Note: See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figure 7: HOPE Credit as a Percent of Tuition and Fees Charged and Net Tuition and Fees Paid by Independent Students

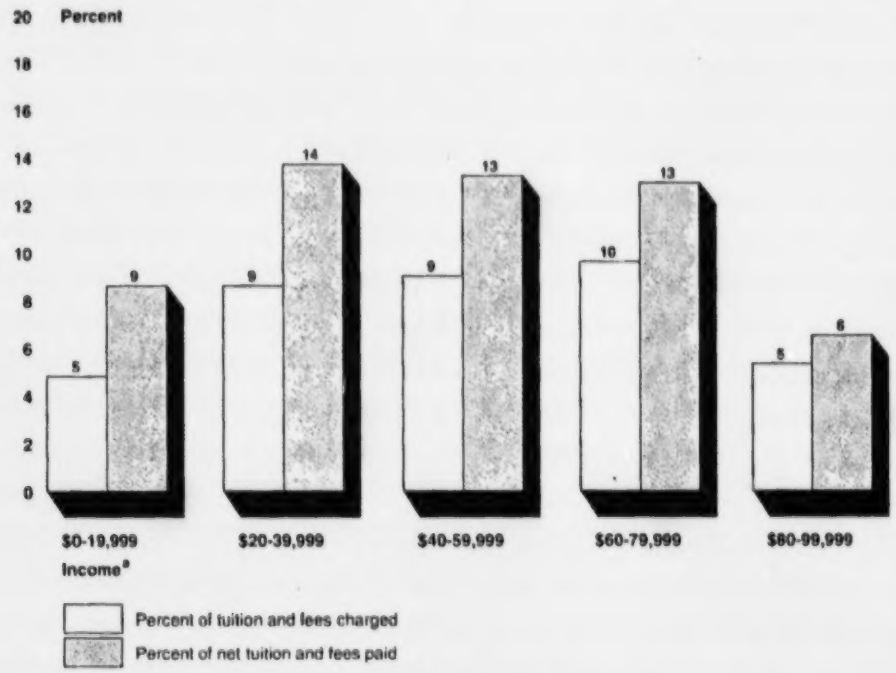


Note: See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figure 8: Lifetime Learning Credit as a Percent of Tuition and Fees Charged and Net Tuition and Fees Paid by Dependent Students

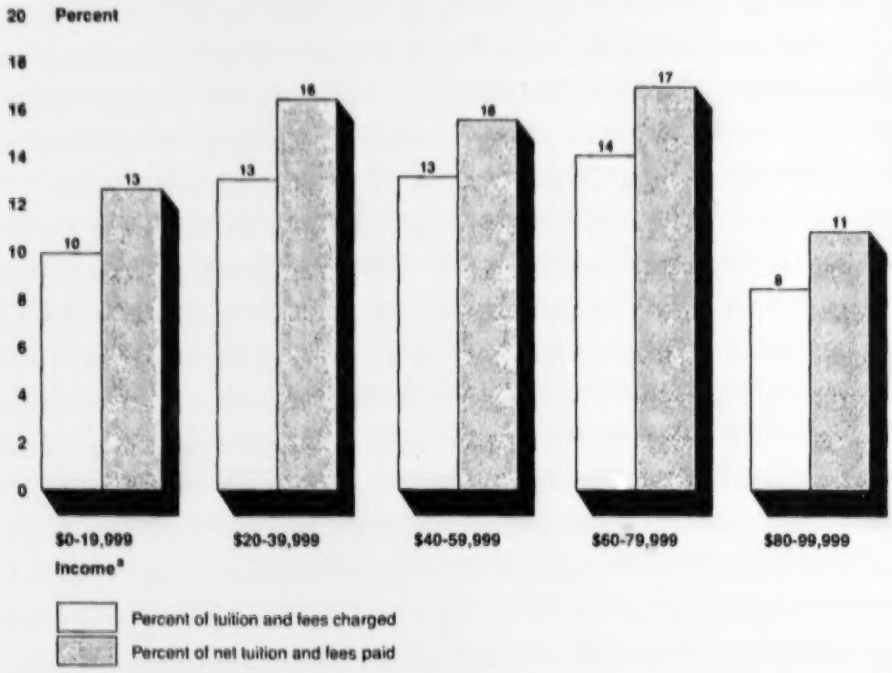


Note: See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figure 9: Lifetime Learning Credit as a Percentage of Tuition and Fees Charged and Net Tuition and Fees Paid by Independent Students



Note: See appendix I for confidence intervals associated with these estimates.

*Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

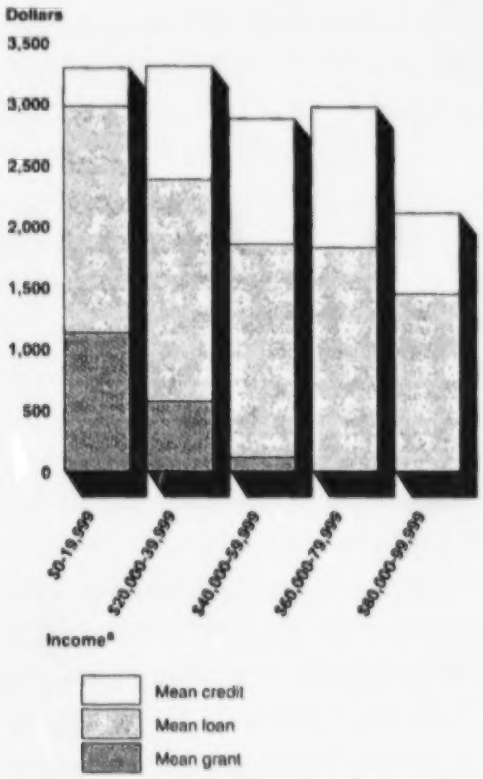
Source: GAO calculations based upon 1999-2000 NPSAS data.

For Title IV Recipients, Higher Education Tax Credits Equaled a Varying Share of Their Aid

Approximately 14 percent of undergraduate students received both title IV aid and a higher education tax credit in 1999-2000; for these students, the HOPE and Lifetime Learning tax credits equaled a varying share of the face value of the title IV aid they received. The HOPE credit equaled, on average, about one-fifth of the average title IV aid received by students. The Lifetime Learning tax credit provided a smaller benefit relative to title IV aid than the HOPE credit, equaling, on average, about one-tenth of the title IV aid received by dependent and independent students. For dependent students with family incomes of $20,000-$40,000, we estimate that the average HOPE credit ($924) was larger than the average title IV grant award ($569). For students with family incomes of $40,000-$80,000,

who typically do not receive grant aid, the HOPE credit provides a significant benefit in comparison to the face value of their federal loan assistance. Figures 10 and 11 show, for dependent and independent students, the estimated HOPE credit and title IV grant and loan aid amounts received. Figures 12 and 13 compare the estimated Lifetime Learning credit and title IV grant and loan aid amounts received by dependent and independent students.

Figure 10: HOPE Credit and Title IV Grant and/or Loan Assistance, Dependent Students Receiving Both



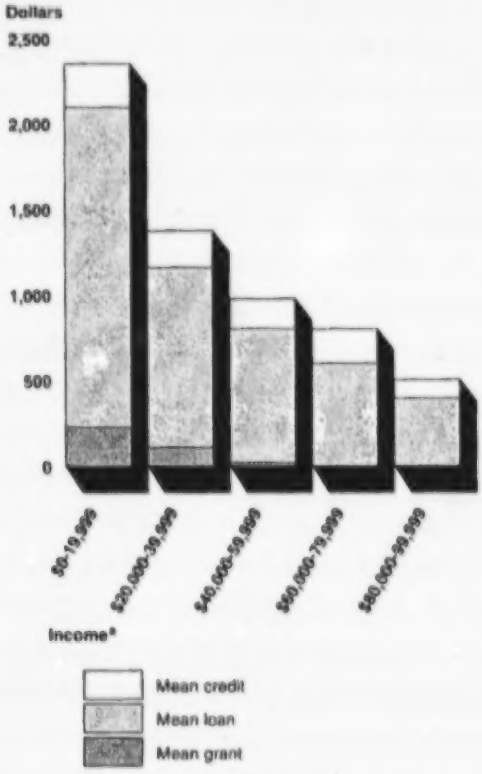
Notes: These calculations report the face value of loans, rather than their economic subsidy value to the student. Recent estimates of the economic subsidy value of title IV student loans put the value at about 15 to 30 percent of the face value of the loan, depending upon the type of loan.

See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figure 11: HOPE Credit and Title IV Grant and/or Loan Assistance, Independent Students Receiving Both



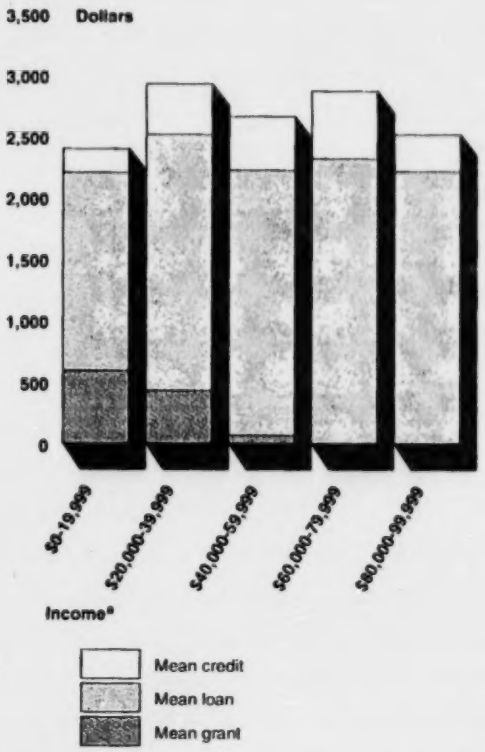
Notes: These calculations report the face value of loans, rather than their economic subsidy value to the student. Recent estimates of the economic subsidy value of title IV student loans put the value at about 15 to 30 percent of the face value of the loan, depending upon the type of loan.

See appendix I for confidence intervals associated with these estimates.

*Independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figure 12: Lifetime Learning Credit and Title IV Grant and/or Loan Assistance, Dependent Students Receiving Both



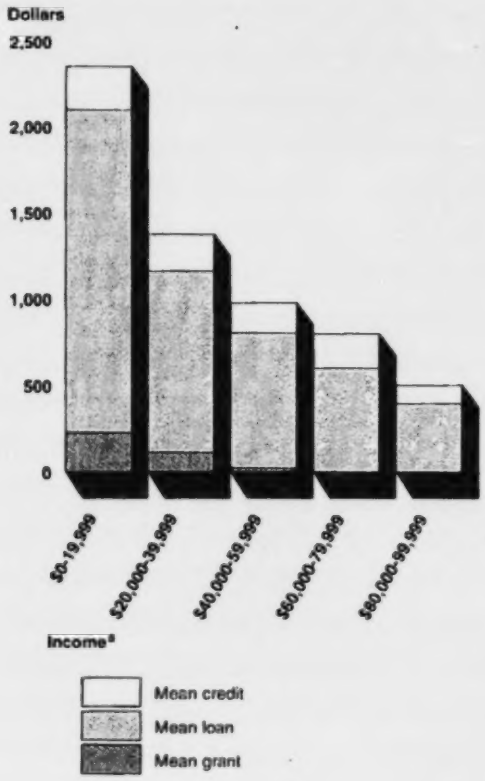
Notes: These calculations report the face value of loans, rather than their economic subsidy value to the student. Recent estimates of the economic subsidy value of title IV student loans put the value at about 15 to 30 percent of the face value of the loan, depending upon the type of loan.

See appendix I for confidence intervals associated with these estimates.

*Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Figure 13: Lifetime Learning Credit and Title IV Grant and/or Loan Assistance, Independent Students Receiving Both



Notes: These calculations report the face value of loans, rather than their economic subsidy value to the student. Recent estimates of the economic subsidy value of title IV student loans put the value at about 15 to 30 percent of the face value of the loan, depending upon the type of loan.

See appendix I for confidence intervals associated with these estimates.

[a]Dependent income equals 1998 parental AGI; independent income equals 1998 student AGI and, if married, spouse's AGI.

Source: GAO calculations based upon 1999-2000 NPSAS data.

For Students Who Did Not Receive Title IV Aid, Credits Equaled, on Average, from One-Tenth to One-Half of the Tuition and Fees They Were Charged

About 6 out of 10 undergraduates did not receive title IV student assistance in 1999-2000. We estimate that slightly more than half of these students received a higher education tax credit. Among those dependent students who received no federal financial aid, the HOPE tax credit equaled about 25 percent of the tuition and fees they were charged, while among independents this share was nearly 50 percent. The Lifetime Learning tax credit equaled a smaller share of tuition and fees charged to both, 10 percent and 14 percent, respectively.

Available Policy and Instructions Provide Clear Guidance about the Impact of Several, but Not All, Tax Provisions on Eligibility for Title IV Aid

Available policy and instructions provide clear guidance about the impact of several higher education tax provisions on eligibility for title IV aid, but in a few instances they do not. Education has not established a policy on how the income that students and parents report as part of the expected family contribution is affected by the tax-free earnings of state savings plans, prepaid tuition plans, and Coverdell accounts. As a result, those who wish to use these provisions are faced with uncertainty about how using them affects title IV aid eligibility. Although Education has established policies about the ownership of these assets for the purpose of calculating the EFC, these policies have not been clearly communicated to aid applicants. Specifically, families who choose to use state savings plans, Coverdell accounts, and Series EE Savings Bonds receive unclear instructions on the FAFSA form about who should claim these assets, the student or parent(s). As a result, they may err when reporting these assets, and their eligibility for aid may be miscalculated.

For many of the higher education tax provisions that we reviewed, the HEA or Education's guidance make clear how their use affects aid eligibility. The HEA prohibits including HOPE and Lifetime Learning tax credits as income or assets in the computation of EFC.[9] In contrast, the act specifies that assets in a tuition prepayment plan do reduce students' eligibility for title IV aid because they reduce students' cost of attendance.[10] In specifying how federal taxation affects the EFC, the HEA also accounts for the effects of two other tax provisions: the student loan interest deduction and the higher education tax deduction. Under the rules of the

[9]The act also prohibits including the credits as financial assistance in the award of title IV aid.

[10]Each dollar of qualified educational expenses paid from a prepaid tuition plan reduces the student's cost of attendance by the same amount. This results in a reduction in the student's calculated financial need and aid eligibility.

federal financial aid methodology, aid applicants reduce their reported income by federal income and payroll taxes, and by an allowance for state taxes. The use of these tax provisions lowers an applicant's tax liability and their adjusted gross income, reducing their EFC and increasing their aid eligibility.[11] The HEA also specifies that interest on tax-free bonds, including Savings Bonds, must be reported as part of the untaxed income included in the EFC. As a result, the HEA makes clear that the use of Series EE Savings Bonds increases an aid applicant's EFC, and reduces their aid eligibility.

In a few instances, neither the HEA's financial aid methodology nor Education's policies establish how parents' and students' use of certain tax provisions—state savings plans, prepaid tuition plans, and Coverdell accounts—affects their eligibility for title IV aid. Before January 2002, the earnings portion of prepaid tuition and state savings plans was taxable upon distribution. As part of the student's taxable income, it was reported on the FAFSA form and included in the calculation of the EFC. After January 2002, in accordance with the Economic Growth and Tax Relief Reconciliation Act, the earnings of these plans were no longer subject to federal taxation. Education has not yet determined whether interest earned on prepaid tuition plans, savings plans, or Coverdell accounts should be reported on the FAFSA form and included in the calculation of EFC as a type of untaxed income.[12] As a result, those who use either tax provision cannot predict whether interest earnings from these plans will increase the income that they report on the FAFSA, thereby increasing their EFC and reducing eligibility for most title IV aid.

For state savings plans and Coverdell accounts, as well as Series EE Saving Bonds, the FAFSA form does not provide clear instructions for reporting to whom these assets belong, the student or parent. The FAFSA has a single set of instructions directing parents and students to report their assets, including state savings plan assets, bonds, and Coverdell accounts. However, the instructions do not indicate who should claim

[11]Both tax deductions reduce an applicant's tax liability and AGI. The first of these changes increases the EFC, while the second reduces it. The net effect of these two changes is to reduce the applicant's EFC.

[12]HEA's financial aid methodology includes some forms of untaxed income in the calculation of the EFC, such as tax-exempt interest income (from IRS 1040, line 8b) and a variety of governmental payments (worker's compensation, untaxed portions of railroad retirement benefits, and Black Lung benefits).

which assets.[11] As a result, parents may claim assets that should be reported as student assets, or vice versa. A mistake of this type has consequences because the HEA specifies that a larger share of student assets is to be included in the EFC than parental assets.[12] Errors in reporting of these assets on the FAFSA may result in a miscalculation of the EFC, and students receiving more or less aid than they would if the assets were correctly reported.

Little Information Is Available to Congress on the Relative Effectiveness of Title IV Grants, Loans, and Hope and Lifetime Learning Tax Credits

Little information is available to Congress on the relative effectiveness of title IV grants and loans and the HOPE and Lifetime Learning tax credits in promoting postsecondary attendance, choice, and completion, or their impact on college costs. Data and methodological challenges make it difficult to isolate the impact of grants, loans, and tax credits. Some academic research has addressed these challenges, and developed evidence about the effects of student assistance, chiefly grant aid. Our review of research found little work undertaken by Education to assess the effectiveness of title IV programs. Treasury has studied the impact of some tax provisions, but has not yet done so for the HOPE or Lifetime Learning tax credits. As a result, Congress has little information to help it weigh the relative effectiveness of these policy tools.

Identifying Impact of Grants, Loans, and Tax Credits Is Difficult, and Little Is Known Beyond the Effects of Grants on Attendance

Data and methodological challenges make it difficult to identify the impact of grants, loans, and tax credits on college attendance and choice, completion, or costs. Many factors in addition to financial aid may influence college-going decisions, including academic preparation, family income and wealth, and the expected costs and benefits of college attendance. To isolate the effect of financial aid on college attendance, for example, researchers need data about each of these factors—both for those who chose to attend college and those who did not. National surveys do not contain complete data on all of these factors for those who attend

[11]Education's Web-based instructions in support of the FAFSA form do, however, provide clear guidance about the ownership of state savings plan assets. The instructions are available at http://www.ed.gov/prog_info/SFA/FAFSA/instr02-03/step4_4.html

[12]If reported as the asset of a dependent student, 35 percent of net state savings plan assets would be counted toward the EFC; if reported as a parental asset, between 2.64 percent and 5.64 percent of their net value would be counted toward the EFC. Incorrectly reporting this asset as a student asset would result in an EFC that is larger than it should be, and an erroneously small estimate of financial need.

and do not attend college.[15] Moreover, researchers have little evidence about how postsecondary institutions respond to changes in the availability of federal aid. Despite such challenges, researchers have begun to establish a body of findings about the effects of federal aid, much of it focusing on the effects of grant aid. They have done so by using a variety of statistical techniques and research designs[16] that mitigate these challenges.

Much of the research we identified examined the impact of grants on attendance. While some studies conclude that grants have not had a large effect on college attendance,[17] most indicate that grants have a positive impact on attendance, though their estimates of its magnitude vary. Recent research by Dynarski (2001) and Seftor and Turner (2002) found that changes in grant aid significantly increased the probability that recipients would attend college.[18]

Little is known about the effects of the higher education tax credits on college attendance and choice, completion or costs. No studies we identified used individual taxpayer data, collected after the credits were enacted, to estimate any of these effects. A few researchers have simulated the effects of the HOPE tax credit on rates of college

[15]Surveys that focus on educational choices and outcomes have sparse information on potential students' parental resources and academic ability. See Sarah E. Turner, "Federal Financial Aid: How Well Does It Work?", John C. Smart (ed), *Higher Education: Handbook of Theory and Research*, vol. XVI (New York: Agathon Press, 2001.

[16]For example, several recent studies use a quasi-experimental design attempting to isolate the effects of financial aid policy changes. See Susan Dynarski, "Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion." John F. Kennedy School of Government, Harvard University Working Paper (RWP01-034), September 2001; and Neil S. Seftor and Sarah E. Turner, "Back to School: Federal Student Aid Policy and Adult College Enrollment," *The Journal of Human Resources* 37 (2002): 336-352. Other studies explicitly model student college attendance decisions to correct for potential bias from incomplete data. See Stephen V. Cameron and James J. Heckman, "The Dynamics of Educational Attainment for Black, Hispanic, and White Males." *Journal of Political Economy*, 109, no. 3 (2001): 455-499. Charles Manski and David Wise, *College Choice in America*. Cambridge, Massachusetts: Harvard University Press, 1983.

[17]See Kane (1999). Cameron and Heckman (2001) estimate that "a $1,000 increase in Pell grant entitlements produces less than a 1 percent increase in enrollments..."

[18]Dynarski studied the effects of the elimination of the Social Security student benefit program in 1982, and concluded that the offer of a $1,000 grant (year 2000 dollars) would increase the probability of attending college by 3.6 percentage points. Seftor and Turner find that changes in the availability of Pell grants had sizeable effects on the college enrollment of older, independent students.

attendance. One simulation estimated that 90 percent of the cost of the HOPE credit is received by students who would have attended college in its absence.[19] None of the studies that we reviewed examined whether the credits have influenced the type of institution that students choose to attend or their rates of college completion. Moreover, none examined whether the credits have made college more affordable for recipients or have led instead to offsetting tuition increases or reductions in institutional aid to credit recipients.

Education and Treasury Have Not Focused on Impact of the Federal Grants, Loans, and Higher Education Tax Credits

Education is authorized to conduct studies on the impact of title IV programs; however, it has focused primarily on customer service and program delivery for two reasons. First, Congress has consistently expressed concern about the management and financial integrity of the title IV programs.[20] A second reason, according to Education, is that it is difficult to "isolate the behavioral effects of title IV aid programs." Therefore, Education has chosen to "assess the effectiveness of the student aid programs without attempting to establish a causal link between program funding and achievement of specific outcomes."[21] As discussed earlier, academic researchers facing the same methodological challenges have begun to produce a body of findings.

Because it lacks reliable data on the individuals using higher education tax credits, Education is unable to determine how tax credits affects college attendance and choice, completion, and costs. Section 6103(a) of the Internal Revenue Code prohibits the Internal Revenue Service, without congressional authorization, from sharing individual taxpayer data with Education. Education has attempted to collect information on the use of tax provisions by incorporating questions about their use into the student survey component of the NPSAS. Dependent students are often unfamiliar with how their parents use tax benefits and, as a result, the information they provide on surveys is unreliable.

[19]Cameron and Heckman's simulation leads them to conclude, "The estimated enrollment response to the HOPE program is a 4.2 percentage point increase in two-year enrollments and a 0.9 percentage point decrease in four-year enrollments (3.3 increase for both categories combined)."

[20]Over the last several years, we have frequently reported to Congress on these issues. See, for example, U.S. General Accounting Office, *Major Management Challenges and Program Risks: Department of Education*, GAO-01-245 (Washington D.C.: January 2001).

[21]U.S. Department of Education, Planning, and Evaluation Service, Biennial Report, 1995-96. (As of 2002, this continued to be Education's position.)

Treasury has access to individual taxpayer information, from which data on the use of higher education tax provisions can be calculated. Although Treasury has studied the effects of other tax credits, it has not examined the HOPE or Lifetime Learning credits since their implementation in 1998.[22] Treasury does not possess data on the receipt of title IV aid for those tax filers who use higher education tax credits, limiting its capacity to assess the credits' effects. Treasury has indicated that its primary evaluation priority is the impact of tax provisions on rates of saving. It has no work underway, or scheduled, to evaluate the impact of higher education tax credits.

Conclusions

Higher education tax provisions are an important new tool in helping many students and families meet the costs of postsecondary education. Millions now receive higher education tax credits, and millions are now saving for college using a variety of other tax provisions. In the future a growing share of students and families may be making combined use of tax credits, other tax provisions and title IV aid. Although many of these tax provisions have clear consequences for title IV aid eligibility, some do not. Lacking clear guidance about the impact of some tax provisions on aid eligibility, some families may find it difficult to plan how they will pay for college. Faced with unclear instructions about reporting their use of tax provisions, some students may make errors that result in inaccurate awards of aid. As an increasing share of students use both aid and tax provisions, more families will be faced with uncertainty about aid eligibility and potential errors in aid awards. Education has the capacity to address both of these problems.

The adoption of higher education tax provisions creates new opportunities and choices for federal policymakers, providing them with a range of tools to accomplish their objectives. For Congress to weigh the relative effectiveness of these policy tools, it must receive information about who these tools serve and their impact. Congress does not yet have this information available to it. Several questions likely to be important to Congress remain to be fully addressed, including:

[22]Treasury was mandated by P.L. 104-188 to "study the effect on adoptions" of the two adoption tax provisions: a tax credit for qualified adoption expenses and an exclusion for employer-paid or reimbursed adoption expenses. The study was prepared in consultation with the Department of Health and Human Services, and released in October 2000. *Report to the Congress on Tax Benefits for Adoption*, http://www.treas.gov/taxpolicy/library/adoption.pdf.

Does the provision of student assistance—grants, loans, or tax credits—result in levels of postsecondary attendance greater than would otherwise occur, and are some forms of assistance more effective at promoting attendance than others?

Do changes in the availability of student assistance influence the types of institutions that students choose to attend?

Do changes in the availability of student assistance affect whether students complete their postsecondary education?

How do postsecondary institutions respond to the changes in the availability of federal student assistance? Have grant and loan increases, or the introduction of tax credits, resulted in tuition increases or reductions in institutional aid to grant, loan and credit recipients and, if so, to what degree?

Noting the difficulty of showing the link between title IV spending and outcomes, Education has undertaken little work identifying the impact of its grant and loan programs. As a result, it cannot fully assess its progress in achieving its strategic goal to "Enhance the Quality of And Access to Postsecondary Education." Moreover, Treasury and Education have not collaborated to provide Congress with evidence about the impact of higher education tax credits and title IV student aid. Determining whether there is a causal link between program and tax expenditures and desired outcomes is difficult, but not impossible. Given an annual investment of billions of dollars—in outlays and revenues foregone—studying their effectiveness is warranted.

Recommendations to the Secretaries of Education and Treasury

To ensure that students and families understand how using tax provisions will affect their eligibility for title IV financial aid, we recommend that the Secretary of Education develop a policy specifying whether the tax-free earnings of state-sponsored college savings plans, tuition prepayment plans, and Coverdell Education Savings Accounts should be included in the calculation of the EFC and, therefore, reported by aid applicants as untaxed income on the FAFSA form. In addition, we recommend that the Secretary clarify FAFSA instructions, clearly explaining who should report ownership of the assets held in state-sponsored savings plans, Coverdell education savings accounts, and Series EE Savings Bonds.

In order to provide Congress with information about the effectiveness of its title IV programs as well as to ensure its programs are achieving results,

we recommend that the Secretary of Education sponsor research on the impact of title IV programs on postsecondary education attendance and choice, completion, and costs.

In order to provide Congress with information about the relative effectiveness of Education's direct expenditure programs and Treasury's higher education tax provisions, we recommend that the Secretaries of Education and Treasury collaborate in studying the impact of tax credits and title IV student aid programs on college attendance and choice, completion, and costs. As a first step, the Secretaries will need to identify opportunities for, and limits to, the sharing of data, and develop a plan to address them.

Agency Comments

In their written comments, Education and Treasury noted that the report was useful and informative, and generally agreed with our findings and recommendations. In response to our recommendation that Education develop policy and clarify instructions on how the use of certain tax provisions affect title IV aid eligibility, Education stated that it would take advantage of the opportunity provided by the upcoming HEA reauthorization to comprehensively review how families now pay for college and, consequently, the title IV student aid eligibility formulas. Regarding our recommendation that Education sponsor research on the effectiveness of title IV programs, Education indicated that it would identify opportunities to sponsor such research, including how the federal investment affects students' postsecondary education attendance and completion as well as institutions' tuition and financial aid behavior. In response to our recommendation that Education and Treasury collaborate in studying the impact of tax credits and title IV student aid programs, Treasury said that such an effort would be beneficial. Treasury also noted that it would take time and staff resources to develop a useful longitudinal database, and that the confidentiality of individuals' tax return information must always be protected. Education noted that it recently collaborated with Treasury in developing a legislative proposal that would allow the agencies to match income information contained on tax returns with title IV student aid application data for the purpose of reducing erroneous payments to individuals participating in the title IV programs. Education said it looked forward to future collaborations with Treasury.

We are sending copies of this report to the Secretaries of Education and Treasury and other interested parties. We will also make copies available

to others upon request. In addition, this report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you have any questions about this report, please contact me on (202) 512-8403. Other contacts and acknowledgments are listed in appendix V.

Cornelia M. Ashby

Cornelia M. Ashby
Director, Education, Workforce,
and Income Security Issues

Appendix I: Estimation of HOPE and Lifetime Learning Tax Credits and Title IV Student Aid

All estimates of title IV student financial aid are based upon the 1999-2000 National Postsecondary Student Aid Study (NPSAS). NPSAS is a comprehensive study that examines how students and their families pay for postsecondary education. It includes nationally representative samples of 50,000 undergraduates, and 12,000 graduate and first-professional students enrolled at approximately 1,000 postsecondary institutions during the 1999-2000 academic year. The data are based on student interviews and administrative records, and NPSAS contains both students who received financial aid and those who did not. Title IV financial aid included Pell and SEOG grants, Stafford loans, PLUS loans, and federal work-study assistance. In reporting on title IV loans, we indicate the face amount of the loans received.

We computed estimates of the HOPE and Lifetime Learning credits received by students using data from NPSAS. NPSAS data are collected at the individual student level, and cannot be aggregated into families or linked to tax filing status. Therefore, our analysis treated individual students as if they were the credit claimants and recipients. Credit amounts for each student in NPSAS were computed by calculating a completed Internal Revenue Service (IRS) form 8863, the form used by tax filers to claim the credits, for each student in the NPSAS sample. We determined a student's eligibility for the HOPE credit on the basis of enrollment status and year in school. We subsequently assumed that all students not eligible for the HOPE credit were potentially eligible for the Lifetime Learning credit.

After establishing eligibility for students in the database, we determined the maximum tax credit each student could receive using the formulas contained in the IRS form 8863, applying the income eligibility requirements associated with these credits. Form 8863 uses adjusted gross income (AGI) for these measures, which is all income minus exclusions from income such as student-loan interest and IRA contributions. For one-half of students in the NPSAS database who filed a Free Application for Federal Student Aid (FAFSA), NPSAS reports the adjusted gross income for the student (and spouse) if they are independent, or the parents (if the student is a dependent). For the other half of students, income is based on a computer-assisted telephone interview, and/or stochastic imputation.

In addition to income, the amount of credit allowed is limited by the amount of tax liability reduced by amounts of dependent care and the elderly and disabled credits claimed. Generally speaking, tax liability is tax owed on a filer's taxable income, which is their AGI minus personal

exemptions and either the standard deduction or the sum of itemized deductions such as mortgage interest or property taxes. Without tax data we had no means of estimating potential itemized deductions, so we assumed that all tax filers used the standard deduction. We calculated the amount of liability owed using the standard tax tables provided by the IRS. There is no information in NPSAS about the amount claimed for dependent care and the elderly and disabled tax credits. We therefore assumed that these returns only had education tax credits.

The steps above allowed us to calculate a tax credit for every student in the NPSAS sample. We estimated that approximately 90 percent of the students in the NPSAS sample who were eligible to claim the credits did so. We had no reliable evidence about different rates of tax credit use across family income or student type; therefore, we randomly selected a 90 percent sample of those students who had a non-zero credit to be the population of credit recipients used to calculate our tax credit estimates.

The results of our estimation were compared to data on credits claimed and allowed, computed from the Statistics of Income (SOI) and provided to us by the IRS. Our estimate of the net value of HOPE and Lifetime credits allowed was 94 percent of the SOI estimate. Our estimates of HOPE credits claimed was significantly lower than the SOI estimate, while our estimate of Lifetime Learning credits claimed was significantly higher than the SOI estimate.

Limitations of Our Analysis

Some aspects of our methodology tend to overstate the credit amounts claimed, while others aspects of the methodology have the opposite effect. Tax filers who had more than one family member enrolled in postsecondary education were able to apply the qualified education expenses of each to the Lifetime Learning tax credit, up to a $5,000 per household limit. NPSAS data do not allow individual student records to be linked into households. Therefore, we were unable to adjust our estimates of students' qualified educational expenses to reflect this feature of the credit. Our estimates of total Lifetime Learning credit amounts were larger than those estimated from the SOI; some of this overestimation may have resulted from this limitation.

Tax filers using either the HOPE or Lifetime Learning credit may find that they are unable to obtain the full value of the credit because they lack sufficient tax liability to do so. Our methodology assigns the tax liability of each family to one student, regardless of the number of family members actually enrolled. For those families that had more than one student

enrolled, our methodology may overestimate the tax liability available to the student and thus overestimate the credit received.

We assumed that all tax filers used the standard deduction. Our estimates of pre-credit tax liability among those with adjusted gross incomes of $20-30,000 were 17 percent lower than SOI's, and 8 percent lower for tax filers with adjusted gross incomes of $30-$40,000. Our estimates of tax liability were slightly higher than those of SOI at AGIs above $75,000. This may result in an underestimation of the credits claimed by tax filers with adjusted gross incomes below $40,000.

Some individuals who are eligible to claim the credit may not do so. There are no reliable data on the rate at which eligible tax filers claim the HOPE and Lifetime Learning credits. Our methodology estimated that 90 percent of the students in the NPSAS sample who were eligible to claim the credits did so. We first calculated a credit amount for all students. Lacking any empirical basis for establishing different rates of credit usage among students, we randomly selected a 90 percent sample of students who had a non-zero credit to be the population of credit recipients used to calculate our tax credit estimates. To the extent that the rate of usage varies across student populations by income or dependency status, our estimates of credit amounts will be too small for some populations, and too large for others.

Data limitations may also affect the quality of tax credit estimates. Our estimates of tax credits may be lower than those obtained from the SOI because SOI data represent pre-audited amounts, and tax filers may have over claimed the credits. While income data for those students who did apply for federal financial aid is reported by NPSAS to be very precise, for the other half of students the income information is acknowledged by NPSAS to be much less reliable. This lack of reliability in the measurement of income may result in imprecise estimates of credit usage and credit amounts received.

Because our estimates come from a sample of the larger population, NPSAS, there is some sampling error associated with them. Moreover, taking a 90 percent sample of those data introduces additional sampling errors. In calculating sampling errors and confidence intervals, we took into account this complex sample design. Sampling errors are often represented as a 95 percent confidence interval: an interval that 95 times out of a 100 will contain the true population value. The upper and lower bounds of the 95 percent confidence intervals for each estimate are presented in the following tables.

Table 2: Estimated Use of Tax Credits and Title IV Aid Among All Undergraduates in 1999-2000

(In percentages)

Income category	Lower and upper bounds of 95 percent confidence interval
Tax Credits and Title IV Aid	13.86-14.53
Tax Credits Only	32.23-33.36
Title IV Aid Only	24.39-25.33
Neither Credits Nor Title IV Aid	27.62-28.69

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 3: Percent of All Undergraduate Students Receiving HOPE Credit

(In percentages)

	Lower and upper bounds of 95 percent confidence interval	
Income category	Dependent	Independent
$0-19,999	2.85-5.15	8.09-10.19
$20-$39,999	24.71-28.87	15.96-19.15
$40-$59,999	30.72-34.89	13.60-17.95
$60-$79,999	31.61-36.82	9.45-14.80
$80-$99,999	29.02-34.53	9.10-21.25

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 4: Percent of All Undergraduate Students Receiving Lifetime Learning Credit

(In percentages)

	Lower and upper bounds of 95 percent confidence interval	
Income category	Dependent	Independent
$0-19,999	3.61-6.77	17.59-20.24
$20-$39,999	27.18-31.21	43.45-47.68
$40-$59,999	30.99-35.07	44.96-50.72
$60-$79,999	29.93-34.25	44.16-51.80
$80-$99,999	36.12-41.51	36.49-48.16

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 5: Average Amount of HOPE Credit

(In dollars)

	Lower and upper bounds of 95 percent confidence interval	
Income category	Dependent	Independent
$0-19,999	264.02-364.57	567.65-666.30
$20-$39,999	876.87-971.27	782.60-877.99
$40-$59,999	982.17-1068.45	671.67-817.21
$60-$79,999	1098.65-1189.18	722.35-960.81
$80-$99,999	614.70-704.14	282.33-493.50

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 6: Average Amount of Lifetime Learning Credit

(In dollars)

	Lower and upper bounds of 95 percent confidence interval	
Income category	Dependent	Independent
$0-19,999	149.09-238.40	236.20-272.83
$20-$39,999	384.46-440.14	199.98-227.31
$40-$59,999	410.21-463.04	155.70-187.94
$60-$79,999	520.77-582.72	176.39-222.90
$80-$99,999	277.05-322.06	84.03-128.43

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 7: HOPE Credit as a Percent of Tuition and Fees Charged and Net Tuition and Fees Paid by Dependent Students

(In percentages)

	Lower and upper bounds of 95 percent confidence interval	
Income category	Credit as percent of tuition and fees charged	Credit as percent of net tuition and fees
$0-19,999	4.37-7.92	8.34-15.11
$20-$39,999	18.11-21.47	28.24-34.3
$40-$59,999	19.20-22.34	28.23-33.23
$60-$79,999	20.73-24.27	29.27-34.12
$80-$99,999	10.29-12.83	13.25-16.58

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 8: HOPE Credit as a Percent of Tuition and Fees Charged and Net Tuition and Fees Paid by Independent Students

(In percentages)

Income category	Lower and upper bounds of 95 percent confidence interval	
	Credit as percent of tuition and fees charged	Credit as percent of net tuition and fees
$0-19,999	18.42-23.26	22.92-28.8
$20-$39,999	31.06-36.27	37.7-44.03
$40-$59,999	34.37-42.96	38.32-48.4
$60-$79,999	37.88-50.69	42.09-56.99
$80-$99,999	17.32-32.94	18.2-37.6

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 9: Lifetime Learning Credit as a Percent of Tuition and Fees Charged and Net Tuition and Fees Paid by Dependent Students

(In percentages)

Income category	Lower and upper bounds of 95 percent confidence interval	
	Credit as percent of tuition and fees charged	Credit as percent of net tuition and fees
$0-19,999	3.63-5.87	6.45-10.75
$20-$39,999	8.12-8.97	12.98-14.32
$40-$59,999	8.52-9.56	12.51-13.83
$60-$79,999	8.97-10.17	11.93-13.82
$80-$99,999	4.91-5.65	6.08-7.00

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 10: Lifetime Learning Credit as a Percent of Tuition and Fees Charged and Net Tuition and Fees Paid by Independent Students

(In percentages)

Income category	Lower and upper bounds of 95 percent confidence interval	
	Credit as percent of tuition and fees charged	Credit as percent of net tuition and fees
$0-19,999	9.27-10.58	11.78-13.45
$20-$39,999	12.48-13.48	15.87-16.95
$40-$59,999	12.41-13.72	14.84-16.2
$60-$79,999	13.29-14.76	16.22-17.57
$80-$99,999	7.36-9.48	9.79-11.85

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 11: Amount of HOPE Credit and Title IV Grant or Loan Assistance Received by Dependent Students Obtaining Both

(In dollars)

	Lower and upper bounds of 95 percent confidence interval		
Income category	Mean title IV grants	Mean title IV loans	Mean HOPE credit
$0-19,999	775.92-1475.29	1214.5-2477.63	264.02-364.57
$20-$39,999	490.44-648.15	1568.21-2047.2	876.87-971.27
$40-$59,999	84.17-141-29	1541.20-1930.96	982.17-1068.45
$60-$79,999	1.08-15.01	1584.03-2060.38	1098.65-1189.18
$80-$99,999	*	1156.63-1728.42	614.70-704.14

*No value calculated.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 12: Amount of HOPE Credit and Title IV Grant or Loan Assistance Received by Independent Students Obtaining Both

(In dollars)

	Lower and upper bounds of 95 percent confidence interval		
Income category	Mean title IV grants	Mean title IV loans	Mean HOPE credit
$0-19,999	259.08-411.96	1683.14-2301.55	567.65-666.30
$20-$39,999	214.19-314.8	1286.51-1716.85	782.60-877.99
$40-$59,999	13.72-59.27	662.30-130.19	671.67-817.21
$60-$79,999	*	588.42-1330.59	722.35-960.81
$80-$99,999	*	46.39-1417.17	282.33-493.50

*No value calculated.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 13: Amount of Lifetime Learning Credit and Title IV Grant or Loan Assistance Received by Dependent Students Obtaining Both

(In dollars)

	Lower and upper bounds of 95 percent confidence interval		
Income category	Mean title IV grants	Mean title IV loans	Mean lifetime credit
$0-19,999	353.27-823.32	990.85-2231.35	149.09-238.40
$20-$39,999	370.47-490	1848.23-2312.28	384.46-440.14
$40-$59,999	49.23-85	1935.13-2369.26	410.21-463.04
$60-$79,999	0-33.41	2063.87-2561.13	520.77-582.72
$80-$99,999	*	1864.27-2554.13	277.05-322.06

*No value calculated.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Table 14: Amount of Lifetime Learning Credit and Title IV Grant or Loan Assistance Received by Independent Students Obtaining Both

(In dollars)

	Lower and upper bounds of 95 percent confidence interval		
Income category	Mean title IV grants	Mean title IV loans	Mean lifetime credit
$0-19,999	190.41-265.51	1646.74-2090.38	236.2-272.83
$20-$39,999	94.84-132.02	919.31-1175.66	199.98-227.31
$40-$59,999	5.65-40.83	623.96-938	155.7-187.94
$60-$79,999	*	434.22-765.56	176.39-222.90
$80-$99,999	*	176.17-615.13	84.03-128.43

*No value calculated.

Source: GAO calculations based upon 1999-2000 NPSAS data.

Appendix II: Research on the Effects of Grants, Loans, and Tax Credits

To identify available information on the relative effectiveness of title IV aid and the HOPE and Lifetime Learning tax credits, we reviewed studies of the factors that affect college attendance and choice, completion, and costs. These outcomes were chosen because they have been the focus of congressional concern, as expressed in committee reports, statutorily established study commissions, and requests for our work from Congress. We examined studies that appeared in books, refereed journals, working papers, dissertations, or government reports. Some of these studies were excluded from further assessment because they did not undertake original data analysis that could identify the effectiveness of federal financial aid programs. Studies that provided an original empirical analysis (or, in the case of tax credits, a simulation methodology) were subsequently assessed according to professional standards of econometric analysis for their methodological rigor. Some of these studies explicitly estimated the effects of federal aid programs. Others estimated how sensitive student attendance, completion, or choice decisions are to changes in the net cost of college. The studies are listed in the bibliography. The results of studies that were judged to contain acceptably identified statistical estimates formed the basis for our findings about the availability of information concerning the relative effectiveness of title IV grants and loans and HOPE and Lifetime Learning tax credits.

Appendix III: Comments from the Department of Education

UNITED STATES DEPARTMENT OF EDUCATION

THE DEPUTY SECRETARY

September 6, 2002

Ms. Cornelia M. Ashby
Director, Education, Workforce,
and Income Security Issues
United States General Accounting Office
Washington, DC 20548

Dear Ms. Ashby:

Thank you for the opportunity to review and comment on your draft report, "Student Aid and Tax Benefits: Better Research and Guidance Will Facilitate Comparison of Effectiveness and Student Use." I am confident that members of Congress will find this report as useful and informative as we in the Department have.

We appreciate your examining the wide range of federal efforts to help students and their families pay postsecondary education expenses, and providing useful information and suggestions. We also appreciate the bibliography of publications and working papers that you have included in the report, which will be useful as we work toward strengthening the quality of educational research and increasing its relevance to meet the needs of our customers. My staff had previously shared our technical comments with your office that, we think, would help the reader understand both the direct and tax expenditure programs that comprise the federal effort to help make college affordable for all.

The formulas that are used to determine a student's eligibility for federal student aid were codified in the 1986 amendments to the Higher Education Act of 1965 (HEA). The "expected family contribution" (EFC), the amount that a student and his or her family can be reasonably expected to contribute toward postsecondary expenses, is derived from an assessment of the family's financial (income and assets) and household circumstances. The HEA defines income for this purpose and includes both taxable (adjusted gross income as reported on the federal income tax return) and untaxed income.

Since 1986, a number of new tax preferences and benefits related to financing higher education have been made available to families, including federal and state tax credits and deductions as well as specialized savings plans. Typically, the Department responded in a piecemeal fashion by adjusting the EFC calculation through legislation or policy guidance. The upcoming HEA reauthorization will provide the opportunity for a comprehensive review of the ways in which families now pay for college and, consequently, the student eligibility formulas. We plan to take advantage of this opportunity.

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Our mission is to ensure equal access to education and to promote educational excellence throughout the Nation.

Consistent with our Strategic Plan, we agree with your recommendation that we ensure our programs are achieving their intended results, and this report can help guide our research and evaluation agenda in support of the Strategic Plan's goals for postsecondary education. We look forward to identifying opportunities for sponsoring evaluations of Title IV programs, including how the federal investment affects students' postsecondary attendance and completion as well as institutions' tuition and financial aid behavior.

Earlier this summer the Administration, in a joint letter signed by Treasury Secretary O'Neill, Office of Management and Budget Director Daniels, and Secretary Paige, forwarded a legislative proposal to the Congress that would allow the Treasury and Education Departments to match income information reported on tax returns and federal student aid applications. This legislation will help reduce erroneous payments to individuals participating in the federal student aid programs and ensure that the right people receive the right amount of federal funds. We look forward to future collaborations with the Treasury Department.

Again, we appreciate the opportunity to comment on the draft report.

Sincerely,

William D. Hansen

Appendix IV: Comments from the Department of Treasury

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

AUG 29 2002

Ms. Cornelia M. Ashby
Director, Education, Workforce,
And Income Security Issues
General Accounting Office
Washington, D.C. 20548

Dear Ms. Ashby:

Thank you for your letter of August 16th to Secretary O'Neill soliciting the comments of the Treasury Department on your draft report, *Student Aid and Tax Benefits: Better Research and Guidance Will Facilitate Comparison of Effectiveness and Student Use*. The Secretary has asked the Office of Tax Policy, which carries out the Department's responsibilities regarding tax-related research, to review the draft report. We found it to be a useful and informative report on the interactions between various tax code provisions and Department of Education grant and loan programs directed toward the policy goals of increasing enrollments in higher education through enhanced affordability.

We are in agreement with the report's recommendation regarding the potential benefits of collaborative research on the part of the Departments of Education and the Treasury. Most of the tax provisions discussed in the report are relatively new. Developing a useful longitudinal data base regarding these provisions will take some time and will be subject to the limited staff resources of the Office of Tax Policy and the Internal Revenue Service. In addition, the confidentiality of information from individual tax returns must always be protected, which would limit the data that could be shared with the Department of Education in joint research.

We appreciated the opportunity our staff was given to consult with the authors of the report during various stages of its development and to provide a number of minor and technical comments. Thank you again for those opportunities and for the opportunity to make these comments.

Sincerely,

Andrew B. Lyon
Deputy Assistant Secretary (Tax Analysis)

Appendix V: GAO Contacts and Staff Acknowledgments

GAO Contacts

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Staff Acknowledgments

In addition to those named above, the following people also made significant contributions to this report: Paul L. Posner, Managing Director, Federal Budget Issues, Strategic Issues; Michael Brostek, Director, Tax Issues; and Patrick di Battista, Malcolm Drewery, Bryon Gordon, John Mingus, Edward Nannenhorn, Linda Stokes, Andrea Romich Sykes, and James Wozny.

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